

Date: Friday, 2/23/2007 1:48:07 PM
 User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: MID TUBE ASSEMBLY
Job Number	: 30928	Part Number	: D3391023
Estimate Number	: 10469	Drawing Number	: D3391 UNDER REVIEW 07.02.26
P.O. Number	:	Project Number	: N/A
This Issue	: 2/23/2007 S.O. No. :	Drawing Revision	: E
Prsht Rev.	: NC	Material	:
First Issue	: / / Type : LANDING GEAR	Due Date	: 3/21/2007 Qty: 1 Um: Each
Previous Run	: 30927		
Written By	:		
Checked & Approved By	: <u>07.02.26</u>		
Comment	: Est. A 05.10.20 New Issue KJ/EC		
	: Est. B 06.02.10 ECN773 dwg rev.D EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	D25001100	Skidtube Extrusion
-----	-----------	--------------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
 SKIDTUBE EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-100	Extrusion	BE 07-02-28

2.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
-----	----------------	-------------------------



Comment: LANDING GEAR RESOURCE 1

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 as per Dwg D3391

4-Open float bag holes to Ø0.250" as per Dwg D3391 using DT8796D visual aid Jig

5-C'sink float bag holes as per Dwg D3391

6-Open remaining holes to Ø0.375"

7-Remove .030" from Fwd indexing Ridge as per Dwg D3391

8-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

9-Deburr

10-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

11-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J"

1012-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.250" and c'sink (20 holes) as per Dwg D3391

13-Open .375" holes to .438"

14-Deburr and blow out all chips from inside tube

BE 07-02-28

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 2/23/2007 1:48:07 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 30928

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

3.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

DP 7-3-2

4.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

Barry J. 07-03-05

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BE 07-03-08

6.0

D33891

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEB

Pick:

Qty

Part Number

Description

Batch

1

D3389-1

Web

327656

A/R

Sikaflex-241/-291

m103497

Sikaflex expire date: 07-16-01

Start: 07-03-08 Time: 7:15

Finish: 07-03-08 Time: 11:15 am

pm 07-03-08 (1)

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)

pm 07-03-08 (1)

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

FR/M-h 07/03/14 (1)

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BE 7/3/10 (1)

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 02/03/00

QA: N/C Closed: _____ Date: _____

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 2/23/2007 1:48:08 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 30928

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

NAS1330C3KB116

Insert



Comment: Qty.: 20.0000 Each(s)/Unit Total : 20.0000 Each(s)

Insert

Pick:

Qty

Part Number

Description

Batch

20

NAS1330C3KB116

Insert

~~m103218~~ m103396

11.0

NAS1330C3KB166

INSERT



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

RivnuT

Pick:

Qty Part Number

Description

Batch

10

NAS1330C3KB166

Insert

~~m103438~~ m100732

12.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1
Install inserts as per Dwg D3391

FL/ 07/03/15

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP
Inspect each insert using DT8821

m100315

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Identify and Stock
Location: _____

PPP B33917

07/3/20

15.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/03/20

Job Completion



U 07.03.20

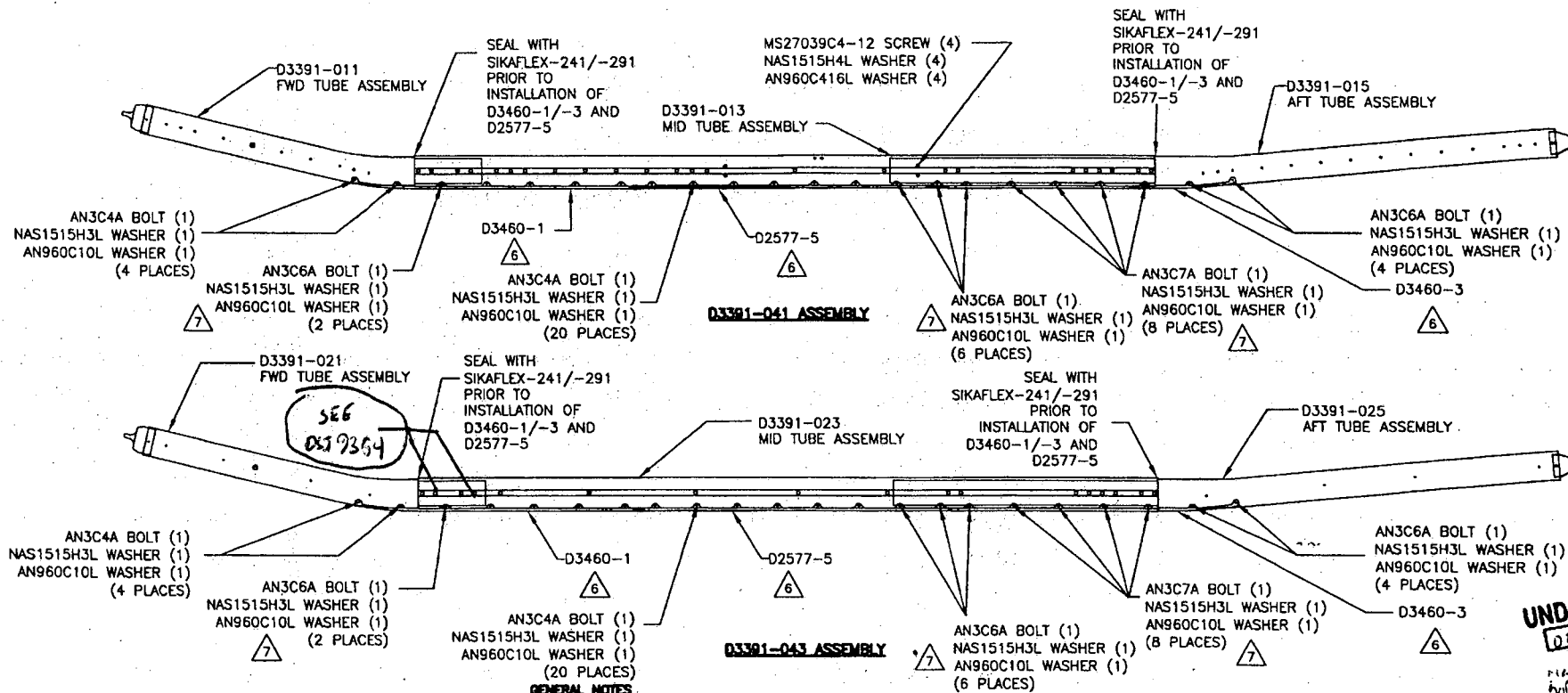
W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



GENERAL NOTES

- 1) ALL DIMENSIONS ARE IN INCHES
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 'E' SIZE HOLES (#0.250-#0.257) FOR WEARSHOE INSERTS. C/SINK #0.391/#0.425 x 100" AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) APPLY A LAYER OF SIKAFLEX -241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES
- 7) DO NOT TORQUE, HAND TIGHTEN ONLY

D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY - 041	QTY - 043	PART NUMBER	DESCRIPTION
X	X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
		D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
24	24	AN3C4A	BOLT
12	12	AN3C8A	BOLT
8	8	AN3C7A	BOLT
44	44	NAS1515H3L	WASHER
44	44	AN960C10L	WASHER
4		MS27039C4-12	SCREW
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
1	1	D2577-5	WEARSHOE
1	1	D3460-1	WEARSHOE
1	1	D3460-3	WEARSHOE

NO. 100928
SUBJECT TO ATTENDANT
WITHOUT NOTICE
ENGINEERING
RETURN TO
SHOP COPY
CONTROLLED COPY

07-02-35
04
UNDER REVIEW
0.9 0.15
FINISHING DETAIL
holes smaller

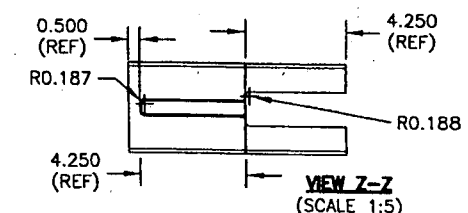
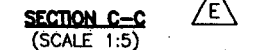
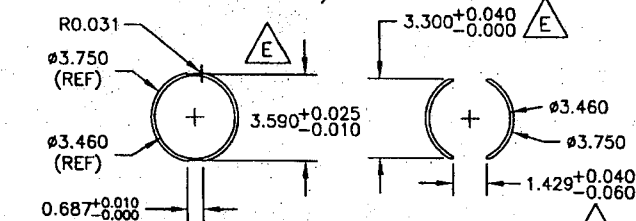
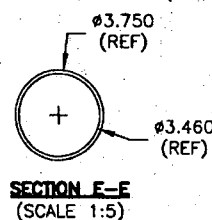
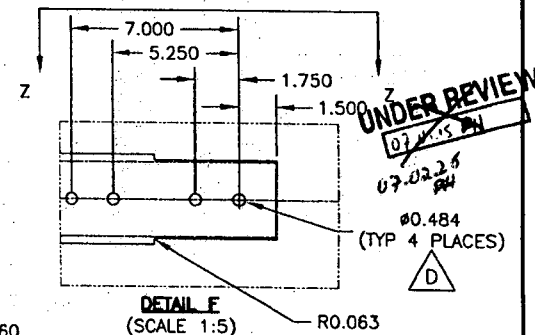
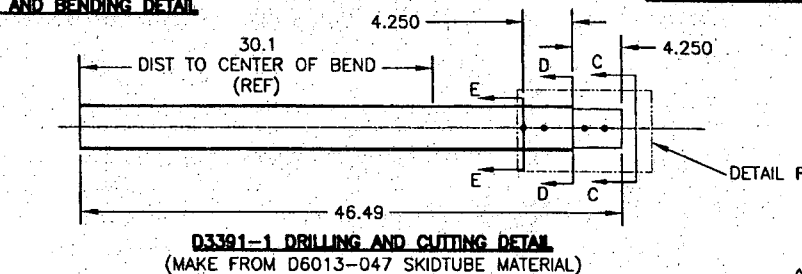
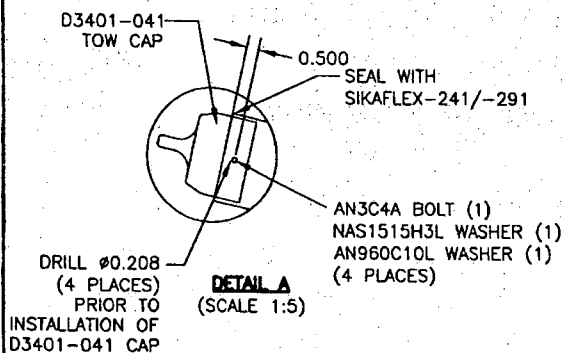
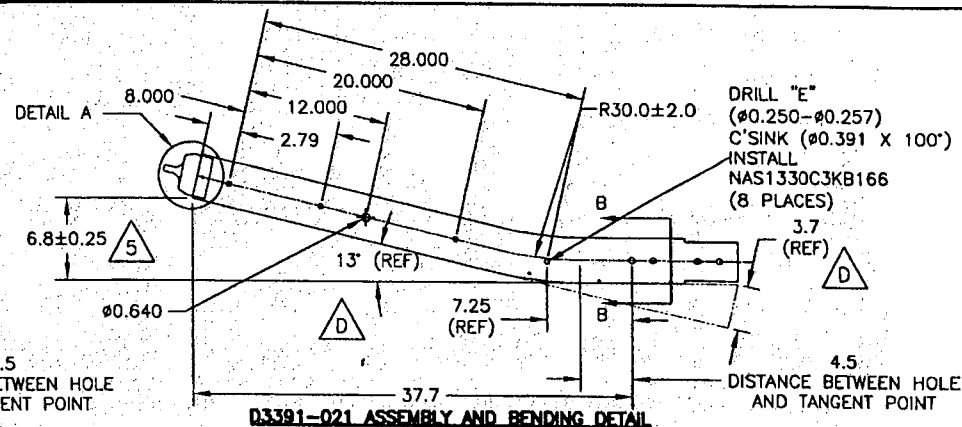
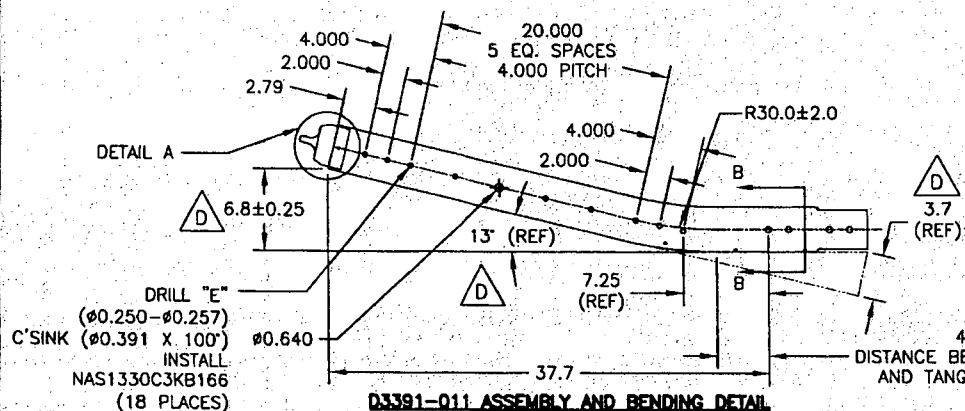
RELEASED
06-05-03

E	06.04.25	CHANGE TOLERANCE, EASE MANUFACTURE
D	06.01.23	UPDATE TOLERANCE, CHANGE HOLE SIZE
C	05.09.27	LENGTHEN AFT EXTENSION
B	05.06.10	DRAWING UPDATES
A	05.02.07	NEW ISSUE

COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.

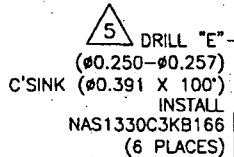
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

DESIGN	PH	DRAWN BY	PH	DART	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	DRAWING NO.	D3391
DATE	06.04.25	TITLE	412 FLOAT SKIDTUBE	REV. E	SHEET 1 OF 5
		SCALE	NTS		



D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

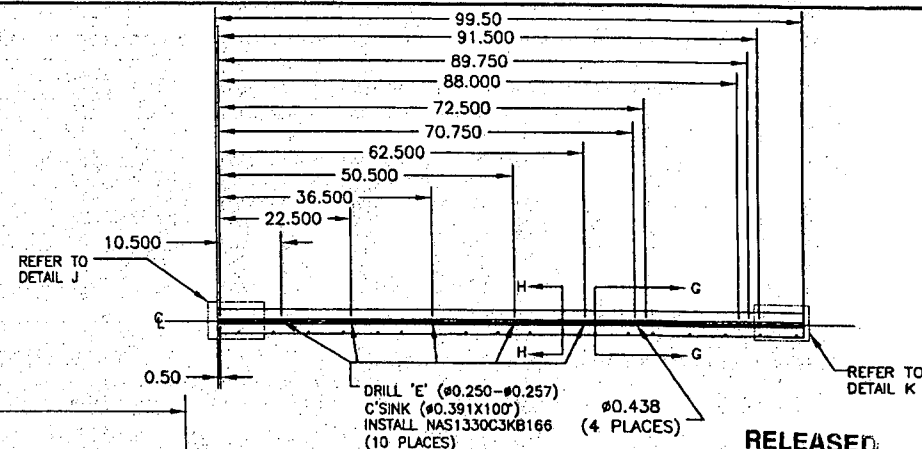
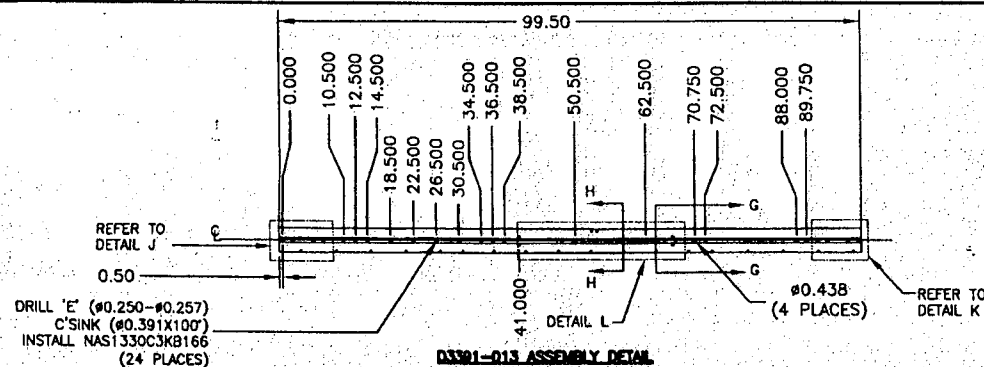
QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
4	4	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
4	4	AN960C10L	WASHER
24	14	NAS1330C3KB166	INSERT



THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

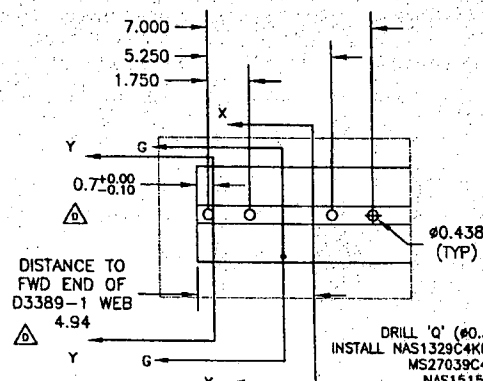
DESIGN	PH	DRAWN BY	PH	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	PORT HADLOCK, MA
DATE	06.04.25	TITLE	412 FLOAT SKIDTUBE	REV. E
				SHEET 2 OF 5
				SCALE 1:10

UNCONTROLLED COPY
ENGINEERING
RETURN TO
SUBJECT TO AMENDMENT
WITHOUT NOTICE
NOX ORDER
30928



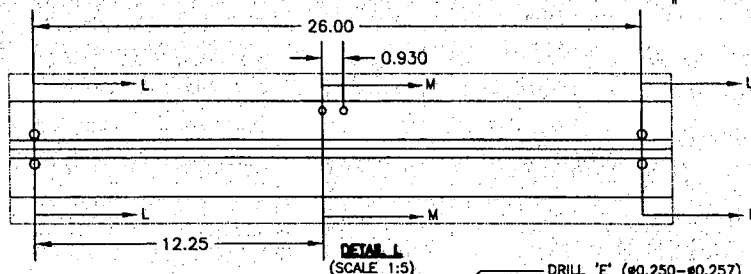
RELEASED

06-05-06

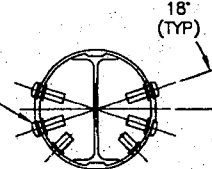


DETAIL J
(SCALE 1:5)

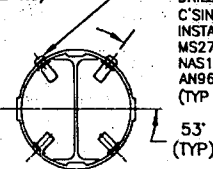
DRILL 'Q' (#0.332-#0.338)
INSTALL NAS1329C4KB140 INSERT
MS27039C4-08 SCREW
NAS1515H4L WASHER
AN960C416L WASHER
(TYP 4 PLACES)



DETAIL L
(SCALE 1:5)

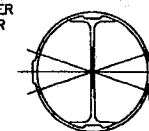


SECTION L-L
(SCALE 1:4)

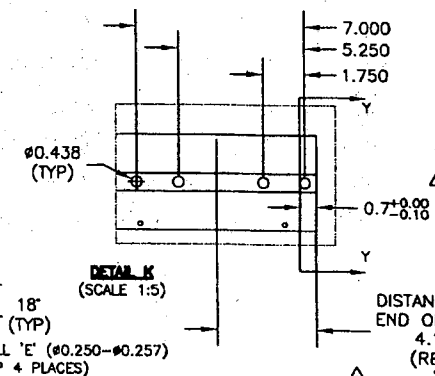


SECTION M-M
(SCALE 1:4)

DRILL 'E' (#0.250-#0.257)
C'SINK (#0.391X100)
INSTALL NAS1330C3KB116 INSERT
MS27039C1-09 SCREW
NAS1515H3L WASHER
AN960C10L WASHER
(TYP 4 PLACES)

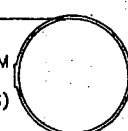


SECTION LL-LL
(SCALE 1:4)



DETAIL K
(SCALE 1:5)

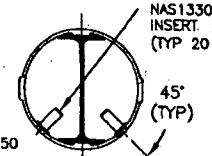
REMOVE 0.225
FROM TOP AND BOTTOM
TO 3.800
(0.7 FROM BOTH ENDS)



SECTION Y-Y
(SCALE 1:4)



SECTION G-G
(SCALE 1:4)



SECTION H-H
(SCALE 1:4)

NAS1330C3KB116
INSERT
(TYP 20 PLACES)

UNDER REVIEW
02-02-26
PH

D3391-013/-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 013	QTY - 023	PART NUMBER	DESCRIPTION
X		D3391-013	MID TUBE ASSEMBLY
	X	D3391-023	MID TUBE ASSEMBLY
1	1	D2500-1-100	EXTRUSION
1	1	D3389-1	WEB
24	20	NAS1330C3KB116	INSERT
24	10	NAS1330C3KB166	INSERT
4		NAS1329C4KB140	INSERT
4		NAS1515H3L	WASHER
4		AN960C10L	WASHER
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
4		MS27039C1-09	SCREW
4		MS27039C4-08	SCREW

D3391-013/-023 MID TUBE ASSEMBLY

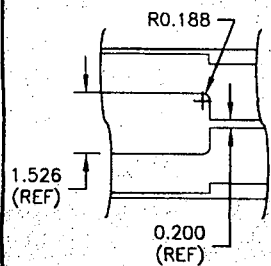
- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSF 0155

NO. 30928
OR ORDER
WITHOUT NOTICE
UNCONTROLLED COPY
RETURN TO
SHOP COPY
ENGINEERING
FOR APPROVED COPY
FOR APPROVED COPY

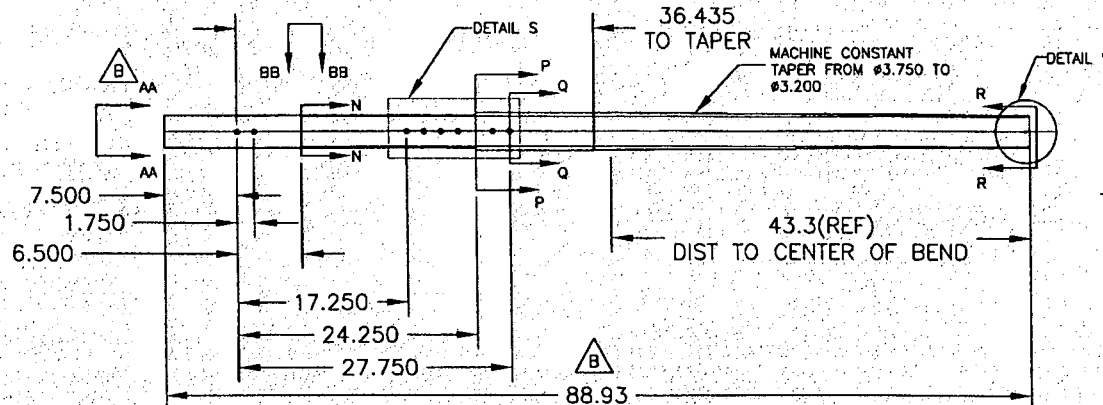
COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

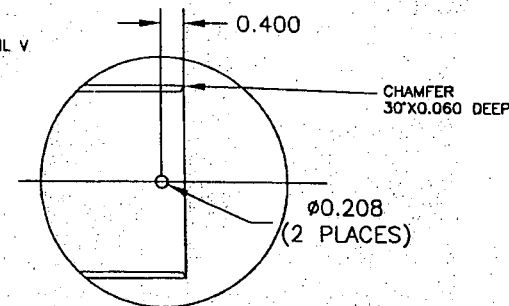
DESIGN PH	DRAWN BY PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, OH	REV. E
CHECKED #	APPROVED #	DRAWING NO. D3391	SHEET 3 OF 5
DATE 06.04.25	TITLE 412 FLOAT SKIDTUBE	SCALE 1:20	



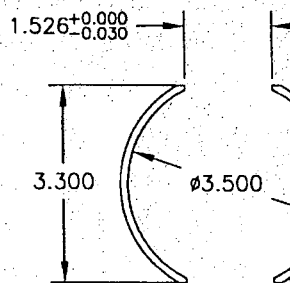
VIEW BB-BB
(SCALE 1:3)



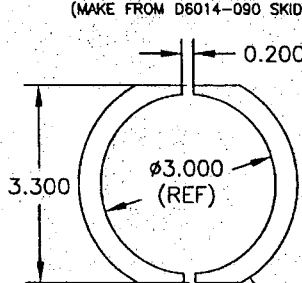
D3391-3 ACT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



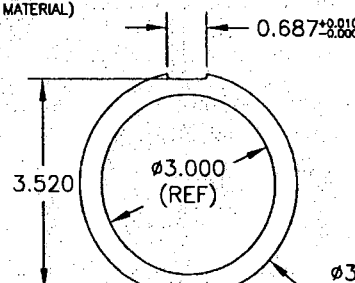
DETAIL V
(SCALE 1:2)



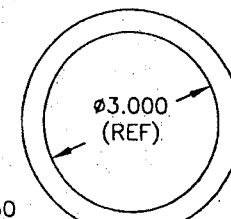
SECTION AA-AA
(SCALE 1:2)



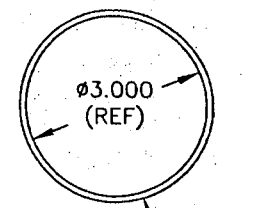
SECTION M-M
(SCALE 1:2)



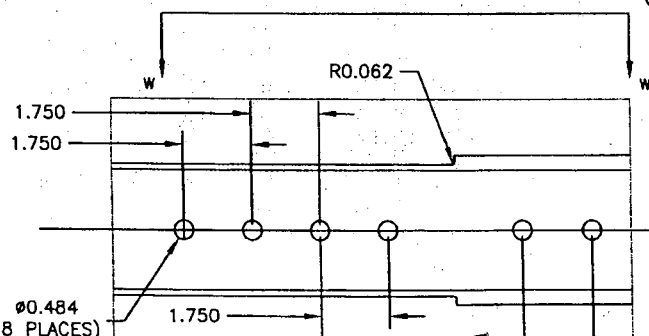
SECTION P-P
(SCALE 1:2)



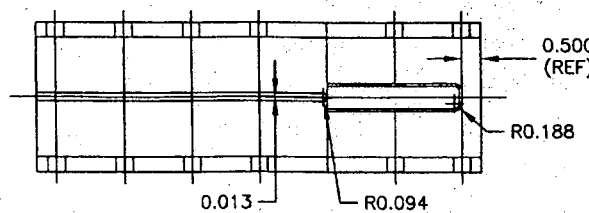
SECTION Q-Q
(SCALE 1:2)



SECTION R-R
(SCALE 1:2)



DETAIL S
(SCALE 1:3)



VIEW W-W
(SCALE 1:3)

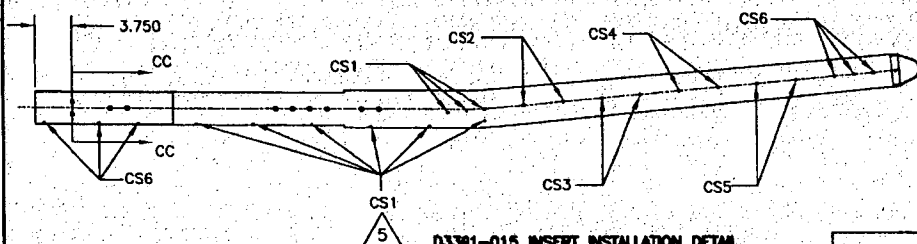
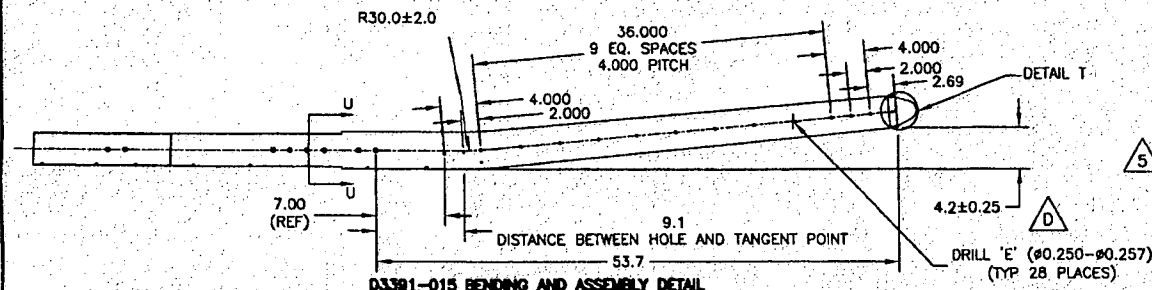
07.02.26 PH
UNDER REVIEW
~~07.01.15.011~~

RELEASED

06.05.03

COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.		DESIGN	DRAWN BY	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA	REV. E
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		PH	PH		
		CHECKED	APPROVED	DRAWING NO. D3391	SHEET 4 OF 5
		DATE		TITLE 412 FLOAT SKIDTUBE	
		06.04.25			SCALE 1:12

NO
30920
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
RETURN TO
ENGINEERING
SHOP COPY
WORK ORDER

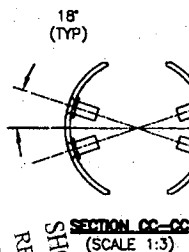


C'SINK AND INSTALL AESS10KBXXX AND/OR NAS1330C3KBXXX IN HOLES MARKED CS1-CS6 AS FOLLOWS

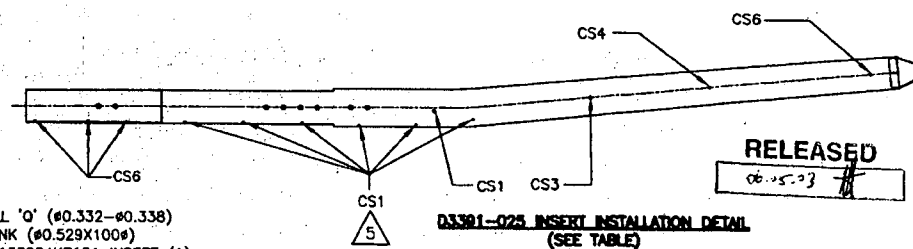
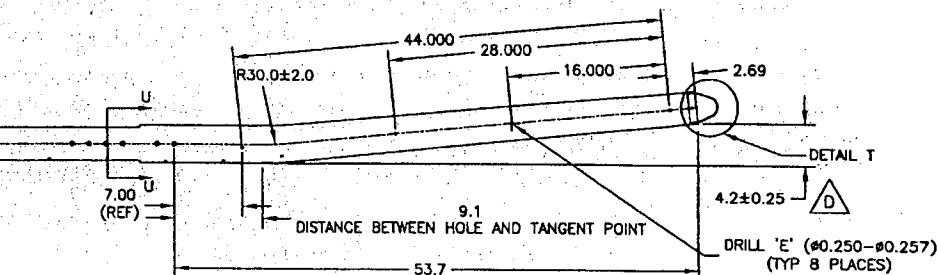
HOLE MARKED	QTY D3391-015	QTY D3391-025	C'SINK	P/N
CS1	18	14	Ø0.425	AESS10KB386
CS2	2	2	Ø0.391	AESS10KB386
CS3	2	2	Ø0.391	NAS1330C3KB316
CS4	2	2	Ø0.391	NAS1330C3KB266
CS5	2	2	Ø0.391	NAS1330C3KB216
CS6	12	8	Ø0.391	NAS1330C3KB166

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
18	14	AESS10KB386	INSERT
4	2	NAS1330C3KB316	INSERT
4	2	NAS1330C3KB266	INSERT
4	2	NAS1330C3KB216	INSERT
12	8	NAS1330C3KB166	INSERT
4	2	NAS1330C4KB151	INSERT
2	2	AN3C4A	BOLT
2	2	NAS1515H3L	WASHER
2	2	AN960C10L	WASHER



DRILL 'O' (Ø0.332-Ø0.338)
C'SINK (Ø0.529X100°)
NAS1330C4KB151 INSERT (1)
(4 PLACES)



COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

DESIGN	PH	DRAWN BY	PH	DART DART AEROSPACE USA, INC. FORT HADLOCK, MA
CHECKED		APPROVED		DRAWING NO. D3391
DATE	06.04.25	TITLE	412 FLOAT SKIDTUBE	REV. E SHEET 5 OF 5 SCALE 1:12

UNDER REVIEW
07.02.25
PH

SEAL WITH
SIKAFLEX-241/-291

RELEASED
06.05.23

UNCONTROLLED COPY
STRICTLY FOR ANENDMENT
NOTICE
30928

SHORT COPY
RETURN TO
ENGINEERING